UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/079,586	02/22/2002	Tatsuo Yajima	219227US2 CONT	7302

22850	7590	11/29/2004

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EXAMINER
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ART UNIT	PAPER NUMBER
2123	

DATE MAILED: 11/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _2//22/02_.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-12_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-12_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _22 February 2002_ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☒ Certified copies of the priority documents have been received in Application No. _10/079,586_.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _02/22/02_.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1-12 were examined.

Drawings

2.   Drawing number seven is objected to under 37 CFR 1.83(b) because they are

incomplete. 37 CFR 1.83(b) reads as follows:

> When the invention consists of an improvement on an old machine the drawing must when possible
> exhibit, in one or more views, the improved portion itself, disconnected from the old structure, and also
> in another view, so much only of the old structure as will suffice to show the connection of the invention
> therewith.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in

reply to the Office action to avoid abandonment of the application. Any amended

replacement-drawing sheet should include all of the figures appearing on the immediate

prior version of the sheet, even if only one figure is being amended. The figure or figure

number of an amended drawing should not be labeled as "amended." If a drawing

figure is to be canceled, the appropriate figure must be removed from the replacement

sheet, and where necessary, the remaining figures must be renumbered and

appropriate changes made to the brief description of the several views of the drawings

for consistency. Additional replacement sheets may be necessary to show the

renumbering of the remaining figures. The replacement sheet(s) should be labeled

"Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct

any portion of the drawing figures. If the changes are not accepted by the examiner, the

applicant will be notified and informed of any required corrective action in the next Office

action. The objection to the drawings will not be held in abeyance. The axes are not

labeled.

Furthermore, the examiner acknowledges the table of reference for figures 1, 2

and 4; however, the material from the reference table should be in each figure.

Priority

3.   Acknowledgment is made of applicant's claim for foreign priority under 35

U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No.

10/079586, filed on 06/27/00.

4.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of
> making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the
> art to which it pertains, or with which it is most nearly connected, to make and use the same and shall
> set forth the best mode contemplated by the inventor of carrying out his invention.

5.   Claims 8 rejected under 35 U.S.C. 112, first paragraph, as based on a

disclosure, which is not enabling. Since no equations appear in the specification

regarding gradient/dynamic distortion, there appears to be a gap of missing step with

using the gradient to find the dynamic distortion perspective.

Claim Rejections - 35 USC § 102

6.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public
> use or on sale in this country, more than one year prior to the date of application for patent in the United
> States.

7.   Claims 1-12 are rejected under 35 U.S.C. 102(b) as being anticipated by

Makiguchi et al.. Makiguchi et al. teaches a CAD simulation program which enabled

estimation of the optical distortion level using windshield shape data (abstract).

Claim 1. A method for evaluating the dynamic perspective distortion a transparent body

(pg.48, left column, paragraphs 4 and 5), which comprises: step of producing a model of

three-dimensionally (abstract: 3 sentence) curved shape of transparent body having

refractive index (inherent to the science of optics: Snell's Law); a step of determining an

eye point at side of the model of three-dimensionally curved shape (pg.48, left column,

paragraphs 4 and 5 with table 1) and a virtual evaluation pattern having a plurality of

evaluation points at the other side of the model dimensionally curved shape (pg. 48-49,

section 2.1, with table 2); a step of observing, from the eye point, three-dimensionally

the virtual evaluation pattern through the transparent body, (pg. 48-49, section 2.1, with

table 2) extracting perspective evaluation points as images evaluation points, obtained

by observing through the transparent body, a two-dimensional picture image obtained

by the observation, and obtaining distance values of adjacent perspective evaluation

points; a step of determining an optional value be a reference value, among these

distance values, and a step of evaluating the dynamic perspective (pg.48, left column,

paragraphs 4 and 5 with pgs 50-51, section 4.3 and 4.4) distortion of the transparent

body by obtaining ratios (pg. 53, table 3, visual sensitivity) of the distance values to the

reference value.

Claim 2. The method for evaluating the dynamic perspective distortion of a transparent body according to Claim 1, (pg.48, left column, paragraphs 4 and 5; pg. 48-49, section 2.1, with table 2; pg.48, left column, paragraphs 4 and 5 with pgs 50-51, section 4.3 and 4.4) wherein the dynamic perspective distortion the transparent body evaluated based on the rate of change of the ratios (inherent: calculation is obtainable given the data mentioned) of the distance values to the reference value.

Claim 3. The method for evaluating the dynamic perspective distortion of a transparent body according to Claim 1, (pg.48, left column, paragraphs 4 and 5; pg. 48-49, section 2.1, with table 2; pg.48, left column, paragraphs 4 and 5 with pgs 50-51, section 4.3 and 4.4) wherein the minimum value among the distance values selected as the reference value, and the dynamic perspective distortion of the transparent body is evaluated based on the maximum value among the ratios of the distance values (inherent: calculation is obtainable given the data mentioned) with respect to the minimum value.

Claim 4. The method evaluating the dynamic perspective distortion of a transparent body according to Claim 1(pg.48, left column, paragraphs 4 and 5; pg. 53, table 3, visual sensitivity), wherein the virtual evaluation pattern an orthogonal grid pattern (figure 6 with pg. 50, section 4.3, 2nd paragraph).

Claim 5. The method for evaluating the dynamic perspective distortion transparent body according to Claim 1, (pg.48, left column, paragraphs 4 and 5; pg. 53, table 3, visual

sensitivity) wherein the transparent body is at least one selected from a glass sheet and a resinous plate (figure 6 with pg. 50, section 4.3, 1st paragraph).

Claim 6. The method for evaluating the dynamic perspective distortion transparent body according to Claim 1, (pg.48, left column, paragraphs 4 and 5; pg. 53, table 3, visual sensitivity) wherein the image seen through the model of three-dimensionally curved shape of the transparent body is animation-displayed (pg.50, figure 5 with section 4.20).

Claim 7. A method for supporting the designing of the three-dimensionally curved shape of a transparent body, which comprises (pgs. 47, right column, paragraphs 1 and 2; 48, left column, paragraphs 4 and 5): step of producing a model of three-dimensionally curved shape of a transparent body having a predetermined refractive index (inherent to the science of optics: Snell's Law); a step of determining an eye point at a side of the model of three-dimensionally curved shape and a virtual plurality of evaluation the model of three-evaluation pattern having a points at the other side dimensionally curved shape (pg. 48-49, section 2.2 and pg. 50 section 4.3 1st paragraph); step of observing, from the eye point, the virtual evaluation pattern through the transparent body, (pg. 48-49, section 2.2 and pg. 50 section 4.3 1st paragraph) extracting perspective evaluation points as images evaluation points, obtained by observing through the transparent body, in a two-dimensional picture image obtained by the observation (pg. 40 figure 4 with section 4.2), and obtaining distance values of adjacent perspective evaluation points (pgs. 50-51 section 4.3 with figured 6-7); the a

step of determining an optional value be a reference value, among these distance values; a step of evaluating the dynamic perspective distortion of the transparent body by obtaining ratios of the distance values the reference value (inherent: calculation is obtainable given the data mentioned), and step of correcting the three-dimensionally curved the transparent body according to the evaluation.

Claim 8. The method for supporting the designing of the three-dimensionally curved shape of a transparent body according to Claim 7, (pgs. 47, right column, paragraphs 1 and 2; 48, left column, paragraphs 4 and 5) wherein the dynamic perspective shape distortion the transparent body evaluated based on the rate of change of the ratios of the distance values the reference value (not addressed by examiner: see 112 1st).

Claim 9. The method for supporting the designing of the three-dimensionally curved shape of a transparent body according to Claim 7 (pgs. 47, right column, paragraphs 1 and 2; 48, left column, paragraphs 4 and 5), wherein the minimum value among the distance values is selected as the reference value, and the dynamic perspective distortion of the transparent body is evaluated based on the maximum value among the ratios the distance values with respect to the minimum value (inherent: calculation is obtainable given the data mentioned).

Claim 10. The method for supporting the designing of the three-dimensionally curved shape of a transparent body according to Claim 7, (pgs. 47, right column, paragraphs 1

and 2; 48, left column, paragraphs 4 and 5) wherein the virtual evaluation pattern an

orthogonal grid pattern (figure 6 with pg. 50, section 4.3, 2nd paragraph).

Claim 11. The method for supporting the designing of the three-dimensionally curved

shape a transparent body according to Claim 7, (pgs. 47, right column, paragraphs 1

and 2; 48, left column, paragraphs 4 and 5) wherein the transparent body is at least one

selected from a plate glass sheet and a resinous (figure 6 with pg. 50, section 4.3, 1st

paragraph).

Claim 12. The method for supporting the designing of three-dimensionally curved

shape a transparent body according to Claim 7, (pgs. 47, right column, paragraphs 1

and 2; 48, left column, paragraphs 4 and 5) wherein the image seen through the model

of three-dimensionally curved shape of the transparent body is animation-displayed.

Conclusion

7.   The prior art made of record and not relied upon is considered pertinent to

Applicant's disclosure. Reference to Wenz, (U.S. Patent 5,444,393 (1995)) is cited as

teaching a process for measuring the dimensions of a space, specifically of a buccal

cavity (i.e., a 3-D image).

Reference to Uemura et al., "Method and Device for Measuring Distortion of a

Transmitting Beam or a Surface Shape of a 3-D Object" (U.S. Patent 5,68,258 (1996)),

is cited as method of measuring distortion of a transmitting beam.

Reference to Ladewski, "Method and Apparatus for Determining Optical Quality" (U.S. Patent 6,208,412 (2001)), is cited as a method of determining optical quality of a transparent product.

Reference to Seto et al., "A New Automatic Optical Distortion Measuring System for Automatic Windshields" is cited as a method of using motion video to capture and detect bright line position based on pixel for measuring distribution of optical distortion over the entire surface of an automobile windshield glass as observed from the driver's eye point with high accuracy by using "distortion angle" as a parameter.
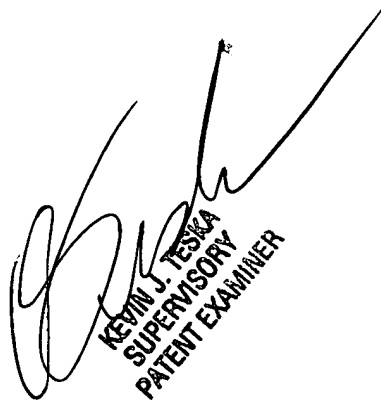
Correspondence Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mr. Tom Stevens whose telephone number is (571) 271-0365, Monday-Friday (8:00 am- 4:30 pm) or contact Supervisor Mr. Kevin Teska at (571) 272-3716. The fax number for the group is 703-308-1396.

Any inquires of general nature or relating to the status of this application should be directed to the Group receptionist whose phone number is (571) 272-1400

November 20, 2004

THS